

Unit Two

Lesson 1

Total mark
25

Worksheet 3

Answer each of the following questions :

1. Write the scientific term :

(5 marks)

1. A type of lamp bases that has two side nails and two pieces of lead to connect the lamp with the electric circuit. (.....)
2. A type of electric lamps that has two filaments of tungsten and two points of connection. (.....)
3. A material that is used to cover the inner surface of the glass tube of fluorescent lamp. (.....)
4. A part of the lamp that heats and emits light when electric current passes through it. (.....)
5. They convert the electric energy into light energy. (.....)

2. [A] Correct the underlined words in the following sentences :

(5 marks)

1. Electric lamps contain hydrogen inert gas. (.....)
2. The filament of the light bulb is made of copper. (.....)
3. The light bulbs are the most popular source of natural light. (.....)

[B] What happens if ... ?

1. The filament of the lamp is made of iron.
.....
.....
2. There is air inside the glass bulb.
.....
.....

3. Complete the following sentences :

(5 marks)

1. is the most popular source of artificial light and it is used in car lights, while is used in decorating the commercial stores.
2. is a coiled thin wire that made of tungsten.

Worksheets

3. consists of a filament, glass bulb and the base of the light bulb, while consists of a glass tube, two filaments of tungsten and points of connection.
4. is an inert gas that increases the lifetime of the filament.
5. has a piece of lead, while the has two side nails and two pieces of lead.
6. allow the electric current to transfer from the base of the lamp to the tungsten filament.
7. The filament of the lamp is made of as it has high melting point.

4. Put the following labels on the following figures :

(5 marks)

Tungsten filament – Points of connection – Copper and lead wires – Base of the light bulb – Glass bulb – A piece of lead – Glass tube.



5. [A] Give reasons for :

(5 marks)

1. Copper and lead wires are very important in the light bulb.

.....

2. The glass bulb of the light bulb contains argon gas.

.....

3. Filaments of electric lamps are made of tungsten.

.....

[B] Mention the function of each of the following :

1. The points of connection in the fluorescent lamp :

.....

2. The filament :

.....

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Worksheet 4

Answer each of the following questions :

1. Choose the correct answer :

(5 marks)

- The is the continuous path through which the electric current passes.
 - open electric circuit
 - battery
 - closed electric circuit
 - lamp
- works as a source of electric current in the electric circuit.
 - Lamp
 - Electric wire
 - Battery
 - Key
- The light bulbs are connected in in the house.
 - parallel
 - series
 - parallel and series
 - series in some places and in parallel in the other places.
- In series connection, the light intensity of the light bulbs
 - decreases by increasing the number of the light bulbs.
 - increases by decreasing the number of the light bulbs.
 - increases by increasing the number of the light bulbs.
 - (a) or (b).
- By unscrewing one bulb from bulbs connected in parallel,
 - the electric current doesn't flow.
 - the electric current flows.
 - light intensity of the other bulbs is still constant.
 - (b) and (c).

2. Write the scientific term :

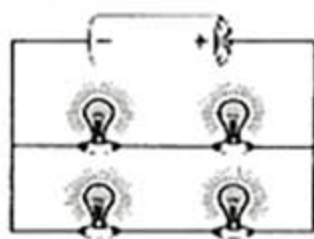
(5 marks)

- A way of connection, in which the light bulbs are connected one after another. (.....)
- A part of the electric circuit used to connect the battery to the lamp in the electric circuit. (.....)
- A way of connection, in which the light bulbs are connected in branching routes. (.....)

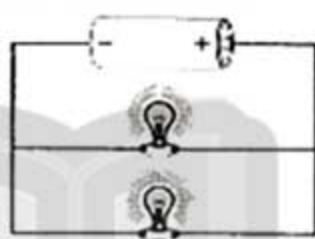
4. A way of connection, in which the light intensity remains constant by increasing or decreasing the number of lamps. (.....)
5. The way of connecting machines and all lamps in the house. (.....)

3. Look at the following circuits, then answer :

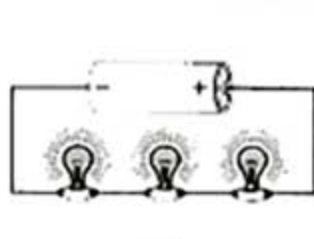
(5 marks)



(a)



(b)



(c)

1. Name one of the above circuits that has electric lamps connected in series?
2. In which circuit do the bulbs glow most brightly?
3. In which circuit do the bulbs glow least brightly?

4. Complete the following sentences :

(5 marks)

1. The electric circuit consists of , and
2. and are methods to connect the electric lamps in the electric circuits.
3. In connection, there is no branches, but in connection, the light bulbs are connected in branching routs.
4. In parallel connection, the light intensity of the light bulbs by increasing or decreasing the number of the light bulbs.
5. In series connection, the light intensity of the light bulbs by increasing the number of the light bulbs.

5. [A] Give reasons for :

(5 marks)

1. Damage any of the lamps in a room doesn't affect the lamps in the other rooms of the house.

2. On unscrewing one bulb from an electric circuit contains electric bulbs connected in series, the electric current doesn't flow.

3. When unscrewing one bulb from an electric circuit contains electric bulbs connected in parallel, the electric current flows.

[B] Explain by drawing only how can you connect two light bulbs :

1. In series

2. In parallel



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Total mark

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Worksheet 5

Answer each of the following questions :

1. Choose the correct answer :

(5 marks)

- Which of the following is from the indirect injuries ?
 - Fires resulting from electricity.
 - Falling from the top of a ladder.
 - The electric shock.
 - Burns resulting from the electric current.
- All the following materials are electric conductors except
 - iron.
 - copper.
 - aluminium.
 - wood.
- Fires caused by electricity are put out by
 - water.
 - sand.
 - air.
 - (a) and (b).
- Which of the following is (are) from the benefits of electricity ?
 - Cooking food.
 - Lighting houses and streets.
 - Operating some machines as televisions and washing machines.
 - (a) , (b) and (c).
- occur as a result of the increase in the temperature of the electric machines.
 - The electric shocks
 - Burns resulting from the electric current
 - Fires resulting from electricity
 - Indirect injuries

2. Write the scientific term :

(5 marks)

- Materials that make the electric circuit open when they are connected with it. (.....)
- A danger results from plugging more than one machine to one socket that causes electric overload. (.....)
- A danger that results from not disconnecting the electric current from the electric machine that generates heat after use. (.....)
- Materials that allow the flow of electricity through them. (.....)
- The material that should not be used to put out electric fires. (.....)

3. [A] Compare between the regular fires and fires caused by electricity : (5 marks)

.....

.....

.....

.....

[B] Give reasons for :

1. Electricity is very important in our life.

.....

.....

2. Plugging more than one machine to one socket causes electric fires.

.....

.....

3. Copper is a good conductor of electricity.

.....

.....

4. [A] Complete the following statements : (5 marks)

1. and are dangers resulted from the improper use of electricity.

2. Iron is from, while is from electric insulators.

[B] Compare between the electric conductors and electric insulators.

.....

.....

.....

.....

.....

5. Look at the opposite figures, then answer :

1. In which figure the light bulb will light up when the electric wires connected to the bulb ? Why ?

.....

.....

.....

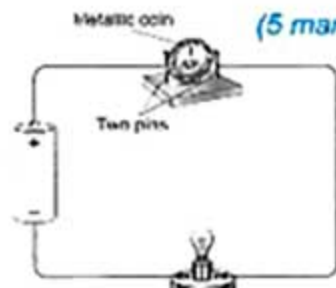


Fig. (a)

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2. In which figure the light bulb will not light up when the electric wires connected to the bulb ? Why ?

.....

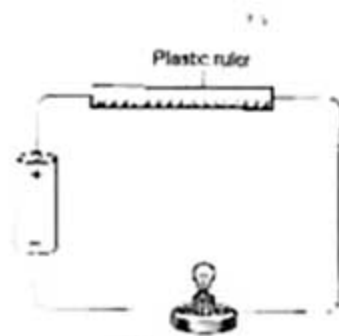


Fig. (b)

3. What do you conclude from the two figures ?

.....

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Worksheet 6

Answer each of the following questions :

1. Put (✓) or (x) in front of each behaviour in the following table : (5 marks)

The behaviour	(✓) or (x)
1. Leaving an electric machine connected with the electric current while taking a bath.	
2. Leaving wires naked and not insulated.	
3. Don't clean or fix an electric machine while it is connected to the electric current.	
4. Place several connections in the same socket.	
5. Placing a piece of plastic in the socket.	

2. [A] Correct the underlined words in the following sentences : (5 marks)

- The electric shock happens when plugging more than one machine to one socket. (.....)
- Water is not used in putting out electric fires because it is a bad conductor of electricity. (.....)
- Thermal glass is among electric conductor substance. (.....)

[B] Mention the type and the reason of this injury :

.....

.....

.....

.....



3. Write the scientific term : (5 marks)

- They are burns that result from electricity and cause the damage of the body tissues. (.....)
- A danger that results when a part of your body touches a wire that has an electric current and the other part touches the ground. (.....)

Worksheets

3. A direct injury results when a part of your body touches spark resulting from the electric fires. (.....)
4. A danger that results when a part of your body touches a wire that has an electric current, but the other part touches a material conducting electricity. (.....)
5. An injury results when a part of your body touches a device that generates heat. (.....)

4. Choose the correct answer :

(5 marks)

1. All the following are from the precautions in dealing with electricity except
 - a. don't place flammable materials close to the electric machines that generate heat.
 - b. place a piece of plastic in the socket.
 - c. don't insert a nail in the socket.
 - d. play with the electric connections.
2. The electric burns happen when
 - a. a part of your body touches a source of electric current directly.
 - b. a part of your body touches a spark resulting from an electric fire.
 - c. a part of your body touches a wire that has an electric current and the other part touches the ground.
 - d. (a) and (b).
3. All the following reasons are from the reasons of the electric fires except
 - a. placing an electric machine that generates heat close to curtains.
 - b. plugging more than one machine in the same socket.
 - c. passing the electric current through the human body.
 - d. not disconnecting the electric current from the electric machine that generates heat.
4. results when your body is a part of an electric circuit.

a. Electric fire	b. Electric conductor
c. Electric burn	d. Electric shock
5. Burns that result from electricity and cause the damage of the body tissues are

a. electric fires.	b. electric shock.
c. electric burns.	d. indirect injuries.

5. [A] Mention three precautions in dealing with electricity.

(5 marks)

.....

.....

.....

.....

[B] Give reasons for :

1. Placing a piece of plastic in the socket.

.....

.....

2. We must not touch any electric machines with wet hands.

.....

.....

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RaNia SaYed

General Exercise of the School Book on

1. Complete the following sentences :

1. and are two ways for connecting electricity.
2. and are some precautions should be taken while dealing with the electricity.
3. The simple electric circuit consists of , and
4. , and are examples of the electric insulating materials.
5. In the case of connecting the lamps in , the lighting of the lamps decreases with their increase in number.

2. Correct the underlined words :

1. The electric lamp converts the electric energy to the kinetic energy. (.....)
2. The filament of the light bulb is made of carbon. (.....)
3. While connecting the lamps in parallel the lamps are connected one after the other. (.....)
4. There are two connecting points at each end of the light bulb. (.....)
5. The electric fire occurs due to the passage of the electric current through the human body. (.....)
6. The electric lamps are connected in the house in series. (.....)
7. When the lamps in the electric circuit are connected in series , they continue to work if a lamp is damaged. (.....)
8. The glass bulb of the electric lamp contains hydrogen gas. (.....)
9. Wood is considered a good conductor of electricity. (.....)

3. Write the scientific explanation to each of the following :

1. The swelling (glass bulb) of the electric lamp contains an inert gas instead of air.
.....
2. Not placing metallic things inside the socket.
.....
3. There are connecting points at the ends of the fluorescent lamps.
.....
4. Not placing flammable materials too close to the electric machines that generate heat.
.....

4. Compare between each of the following :

1. Connecting electric lamps in series and connecting in parallel.

2. The light bulb and the fluorescent lamp in respect to structure.

3. The conducting materials of electricity and the non-conducting materials.

5. Write the scientific term of each of the following :

- Materials that allow the electric current to pass through it. (.....
- Fires occur due to the increase in the temperature of the electric wires. (.....
- Materials that don't allow the electric current to pass through it. (.....
- The way that electric lamps are connected one after another, and the intensity of the light of the lamps decreases with the increase in their number. (.....
- A tool used to convert the electric energy to light energy. (.....
- The way that the lamps are connected through branching routes and light of the lamps are not affected with the increase in their number. (.....
- One of the dangers of the electricity occurs due to the passage of the electric current through the human body. (.....
- One of the dangers of the electricity is that it destroys the tissue of the body. (.....

6. Write your own paragraph on each of the following :

1. The electric shock.

2. The electric fires.

3. The electric lamp.

4. The precautions that should be taken to deal with the electricity.

Model Exam

1

on Unit Two

25

Answer each of the following questions :

1. Complete the following statements :

(5 marks)

- The fluorescent lamps contain gas and a little of
- Rubber is considered from the electric, while copper is considered from the electric
- When connecting more than one bulb with the circuit in series, the light intensity
- In houses, the electric lamps are connected in
- The electric shock occurs as a result of passing through the human body, in many cases it causes
- The electric circuit consists of battery, lamp and

2. [A] Give reasons for :

(5 marks)

- There is a glass bulb around the filament.
.....
- We shouldn't touch uncovered electric wires.
.....

[B] Write the scientific term :

- They allow the electric current to pass from the base of the light bulb to the tungsten filament. (.....)
- The material that should be used to put out electric fires. (.....)
- A type of lamps their inner surface is covered with phosphoric material. (.....)

3. Choose the correct answer :

(5 marks)

- The electric shock may cause
a. electric current. b. electric burns. c. electric fires. d. electric overload.
- If we have four light bulbs and we need to get high light intensity, so we must connect them
a. in series. b. in parallel. c. (a) and (b). d. no correct answer.
- If we connect an eraser with an electric circuit, the
a. electric circuit will be opened. b. electric circuit will be closed.
c. electric current will flow. d. (b) and (c).

4. Which of the following gases is found in the fluorescent lamp but not in the light bulb ?
- a. Argon. b. Water vapour. c. Neon. d. Mercury vapour.
5. Electric wires must be covered with
- a. copper. b. iron. c. lead. d. plastic.

4. [A] Correct the underlined words : (5 marks)

- The electric lamp contains active gas to increase the lifetime of the filament. (.....)
- The inventor of the electric light bulb is the scientist Archimedes. (.....)
- The human body is a good conductor of electricity as it contains gases. (.....)

[B] What happens when ... ?

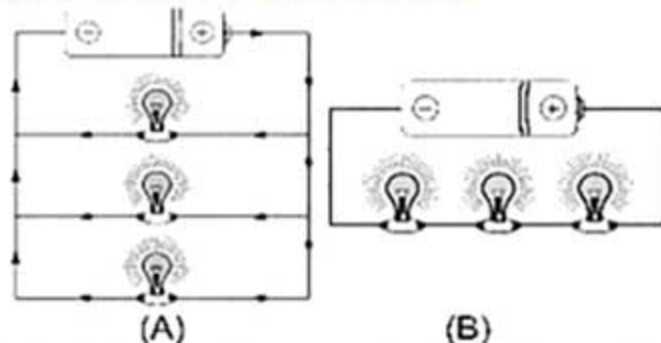
- One of the light bulbs is broken, while it is connected in series with the others.
.....
- You insert a metallic bar in an electric socket.
.....

5. [A] Put (✓) or (x) : (5 marks)

- The fluorescent lamp is known as neon lamp because it contains the inert neon gas. ()
- We can use a piece of wood to push the injured person during electric accidents. ()
- The spiral base has two side nails and two pieces of lead. ()

[B] Notice the two following figures then answer the questions :

- Complete :** Figure (A) represents the way to connect the electric lamps in, while figure (B) represents their connection in



- Choose :** The lighting of the bulbs in figure (B) is

(more than - less than - equal to) the lighting of the same bulbs in figure (A).

- What happens if :** An electric lamp in figure (B) burns ?
.....

Model Exam

2

on Unit Two

Total mark

25

Answer each of the following questions :

1. Choose the correct answer :

(5 marks)

- The inert gas that exists inside the light bulb is used to
 a. decrease the amount of electricity. b. decrease the lifetime of the filament.
 c. increase the amount of electricity. d. increase the lifetime of the filament.
- Water is not used in putting out fires caused by electricity, because
 a. it is a bad conductor of electricity. b. it is a good conductor of electricity.
 c. it may evaporate. d. no correct answer.
- All the following materials allow the flow of the electric current except
 a. iron. b. aluminium. c. rubber. d. copper.
- Tungsten is preferred to be used in the light bulb because it has
 a. bad conductivity. b. high melting point.
 c. low density. d. low melting point.
- Plugging many appliances to one socket may cause
 a. heating up of wires. b. electric overload.
 c. fires. d. (a) , (b) and (c).

2. [A] Write the scientific term :

(5 marks)

- A danger of electricity that happens when plugging more than one machine to one socket. (.....)
- Materials that don't allow electricity to flow through. (.....)
- It carries the lamp in upright position and connects the lamp to electricity. (.....)

[B] What happens when ... ?

- The filament of the light bulb is made of iron.

- The electric fires are put out by water.

3. Complete the following statements :

(5 marks)

- Among the safety precautions when dealing with electricity are and
- The electric current has only one path when the light bulbs are connected in

- The damage caused by electricity and lead to destroy the tissues of the body is called
- There are two types of lamp bases which are base and base.
- We should not place the flammable materials such as furniture and close to electric machines that generate such as and electric iron.
- Electric lamps emit light when passes through them.

4. [A] Give reasons for :

(5 marks)

- The light bulbs are connected in parallel in the house.
.....
- There are two points of connection at each tip of the fluorescent lamp.
.....

[B] What is meant by ... ?

- Electric circuit.
.....

- Electric fires.
.....

- Parallel connection.
.....

5. [A] Compare between each one of the following :

(5 marks)

Points of comparison	Connecting in series	Connecting in parallel
1. Light intensity of the lamps :
2. Removing one of the lamps from the connection :

[B] Correct the underlined words :

- The inner surface of the tube of the fluorescent lamp is covered with a carbonic material. (.....)
- The glass bulb of the light lamp contains hydrogen gas. (.....)
- When we put a piece of plastic in an electric circuit, the electric current passes. (.....)

Unit Three

Lesson 1

Total mark
25

Worksheet 7

Answer each of the following questions :

1. Complete the following sentences :

(5 marks)

- Types of solar eclipse are , and
- The solar eclipse doesn't last more than minutes and seconds.
- solar eclipse occurs when the Earth lies in the umbra region of the Moon.
- During solar eclipse, lies between and
- The annular eclipse occurs to the part of Earth that lies in the of the Moon.

2. [A] Give reasons for :

(5 marks)

- Special glasses must be used to look at the solar eclipse.

- The type of solar eclipse differs according to the movement of the Moon in front of the Sun.

[B] Correct the underlined words :

- Light travels in curved lines. (.....)
- The Moon revolves around the Earth in a circular orbit. (.....)
- When the Earth is in the semi-shaded area of the Moon, annular solar eclipse occurs. (.....)

3. [A] What happens if ... ?

(5 marks)

- A dark object is placed between a lighted candle and a screen.
- The Moon hides the sunlight completely from the Earth's surface.

[B] Write the scientific term :

- The dark inner shadow area in which the total solar eclipse appears. (.....)
- The type of solar eclipse in which the Sun appears as a lighting ring. (.....)
- The faint outer shadow area in which the partial solar eclipse appears. (.....)

4. [A] What is meant by ... ?

(5 marks)

1. Total solar eclipse :

.....




.....

2. Partial solar eclipse :

.....

.....

[B] Choose from column (A) what suits in column (B) :

(A)	(B)
1. Partial solar eclipse	a. 
2. Annular solar eclipse	b. 
3. Total solar eclipse	c. 

1.

2.

3.

5. Examine the opposite figure, then answer :

(5 marks)

1. Label the figure :

①

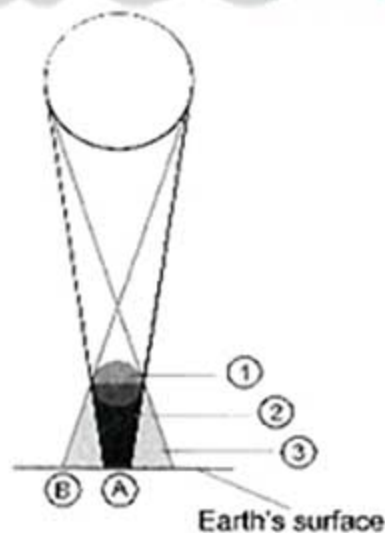
②

③

2. Mention the type of solar eclipse occurs at :

(A)

(B)



Unit 2 Electric Energy

Lesson 1

Electric lamps

Answer Guide P. 17

Worksheet 5

1 A) Choose the correct answer:

1. A /An converts the electric energy into light energy.
a. electric iron b. electric lamp c. electric heater d. washing machine
2. The filament of the light bulb is made of
a. tungsten b. copper c. iron d. aluminum
3. A prevents air from reaching the filament.
a. glass bulb b. copper wire
c. a piece of lead d. base of the light
4. All the following are parts of the fluorescent lamp except the
a. points of connection b. glass tube
c. tungsten filament d. base of the bulb

B) Give a reason for each of the following:

1. The filament of the light bulb is made of tungsten.
.....
2. The glass bulb of the light bulb is filled with inert argon gas.
.....
3. There are two points of connection at each tip of the fluorescent lamp.
.....

2 A) Complete the following:

1. and are kinds of electric lamps.
2. The filament of the regular electric lamp is made of because it has a high

Worksheets & Exams

3. is used to prevent the tungsten filament from burning.
4. In the light bulb copper wires allow the electric current to pass from and
5. A fluorescent lamp filled with inert gas.
6. The inventor of the electric lamp is

B) Put (✓) or (X) in front of each of the following:

1. Electric bulbs are one of the most popular sources of artificial light. ()
2. The glass bulb of the electric lamp contains the atmospheric air. ()
3. Fluorescent lamps are called neon lamps, because they contain an inert gas called neon. ()
4. The filament of the light bulb is made of copper. ()

3 A) What is meant by ...?

- Electric lamp.

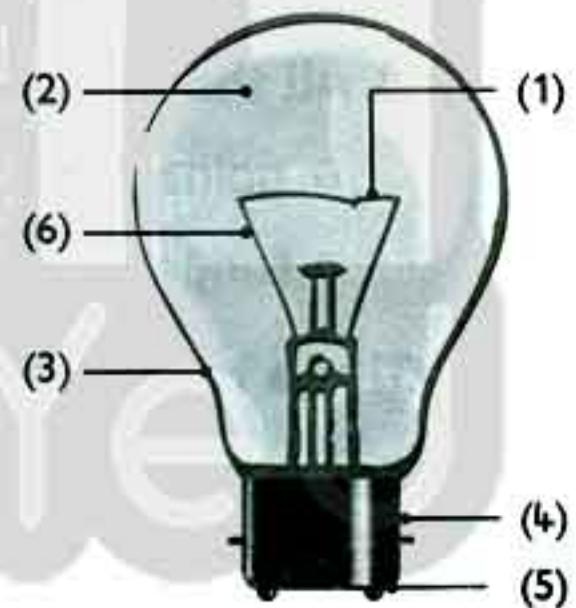
.....

B) Look at the opposite figure, then answer:

a. What is the name of this figure?

b. Label the figure:

- | | |
|---------|---------|
| 1. | 2. |
| 3. | 4. |
| 5. | 6. |



4 A) What happens if ...?

1. The filament of the lamp is made of iron.

.....

2. There is air inside the glass bulb.

.....

B) Correct the underlined words in the following sentences:

1. The glass bulb of the light bulb contains an active gas.
2. There is one kind of bases for the electric bulb.
3. Electric lamps and devices are connected in series at home.
4. The light energy is converted into electric energy in the fluorescent lamp.

Worksheet 6

1 A) Put (✓) or (X) in front of each of the following sentences:

1. Lamps are connected in series in houses. ()
2. The main source of the electric current in the electric circuit is the battery. ()
3. If one of the lamps or electric devices at home is not working, the rest of lamps and devices keep working. ()
4. The light intensity decreases if a circuit is connected in series by increasing the number of lamps. ()

B) Choose the correct answer:

1. When the electric lamp is connected in parallel with others in the electric circuit, the light intensity
 a. increases b. decreases c. doesn't change
 d. sometimes decreases and increases other times
2. When we connect more than one bulb in series with an electric source, the lighting of the bulb
 a. decreases b. remains as it is c. increases d. no correct answers
3. The light bulbs are connected in in the house.
 a. parallel b. series
 c. parallel and series d. no correct answers

2 A) Match words from (A) with the suitable sentences from (B):

(A)	(B)
1. Electric circuit	a) It is a method where lamps are connected one after another in the electric circuit.
2. Parallel	b) It is a closed and continuous path through which the electric current passes.
3. Series	c) It is a way in which the light bulbs are connected in branching routes.
	d) It is an inert gas used to fill electric lamps.

1.

2.

3.



Worksheets & Exams

B) Correct the underlined words in each of the following:

1. Open electric circuit has no gaps.
2. In series electric circuit, when one light bulb burns out, the other lamps remain light.
3. To connect the lamps in parallel, the lamps are connected one after the other.
4. Fluorescent lamp contains the inert neon gas.

3 A) Write the scientific term for each of the following:

1. Lamps are called neon lamps. (.....)
2. A method where the electric lamps are connected in branching routes. (.....)
3. A type of lamps whose inner surfaces are covered with phosphoric material. (.....)

B) Give a reason for each of the following:

1. There must be a switch in the electric circuit.
.....
2. It is advisable to use energy-saving lamps.
.....
3. Electric lamps should be connected in parallel in houses.
.....

4 A) What happens if ...?

1. There is no battery in the electric circuit.
.....
2. The electric lamps are connected in series.
.....

B) Compare between connecting in series and connecting in parallel:

P.O.C	Connecting in series	Connecting in parallel
1. Light intensity		
2. The effect of burning or unscrewing any of lamps		

Lesson 2

Dangers of electricity and how to deal with it

Answer Guide P. 18

Worksheet 7

1 A) Complete the following sentences:

1. Materials are divided into and according to their conductivity of electricity.
2. The two types of electric injuries are and
3. The electric shock takes place when the passes through the human body.
4. Dangers of electricity include, and

B) Classify the following materials into electric conductors and electric insulators:

Materials	Electric conductors	Electric insulators
Wood		
Iron		
Copper		
Aluminum		
Plastic		
Wool		
Rubber		
Glass		

2 A) Write the scientific term for each of the following:

1. One of the electric dangers that damages body tissues. (.....)
2. Substances that don't allow electricity to flow through. (.....)
3. Substances that allow electricity to flow through. (.....)

B) What are the dangers that happen in the following cases?

1. Opening more than one electric device through one socket.
2. Leaving electric wires without covering them.



Worksheets & Exams

3 A) Choose the correct answer:

- Electric wires are covered with
a. lead b. copper c. plastic d. wood
- Plugging more than one device in one socket leads to
a. electric shock b. electric burn
c. increasing electric load d. all the previous answers
- is a good conductor of electricity.
a. Wood b. Copper c. Plastic d. Glass

B) Put (✓) or (X) in front of each of the following sentences:

- Plastic is a good conductor of electricity. ()
- Electric insulators allow the flow of electric current through. ()
- Iron, copper and rubber are electric conductors. ()
- When putting a piece of wood in an electric circuit, the electric current flows through it. ()

4 A) What happens in the following cases?

- Touching a source of electricity directly with a part of your body.
.....

- Inserting a piece of a rubber eraser in an electric circuit.
.....

- Putting out an electric fire by water.
.....

B) Give a reason for each of the following:

- Electric wires are made of copper.
.....

- Wood is considered an electric insulator.
.....

Worksheet 8

1 A) Put (✓) or (X) in front of each of the following sentences:

1. It is advisable to put out an electric fire using water. ()
2. We use electric insulators when we are dealing with a person suffering from an electric shock. ()
3. The battery is not a main component in the electric circuit. ()
4. It is preferable to use an electric switch in houses. ()

B) Mention factors affecting the strength of the electric shock.

.....

.....

.....

2 A) Give a reason for each of the following:

1. We should never push a person suffering from an electric shock using an iron bar.
.....
2. Power cables are covered with insulators.
.....
3. Electric wires are made of copper.
.....

B) Correct the underlined words:

1. Electric fires happen when electricity passes through the human body.
2. Among the causes of the electric fires is decreasing electric load.
3. Water is not used to put out regular fires.

3 A) Complete the following sentences:

1. The leads to destroying the tissue of the body..
2. Metallic materials are considered electric

B) What are the precautions in dealing with electricity?

.....

.....

.....

.....

Worksheets & Exams

C) How would you advise the following persons?

1. Some people are putting out an electric fire using water.

.....

2. A person is trying to save another one suffering from an electric shock.

.....

4 A) Write the scientific term for each of the following:

1. It occurs due to the passing of an electric current through the human body.

(.....)

2. Burns resulting from electricity that damage body tissues.

(.....)

B) What are the causes of electric fires?

.....

C) What happens if ...?

1. Using sand to put out electric fires.

.....

2. You place an electric heater close to furniture.

.....

3. Touching an uncovered wire while touching the ground.

.....

4. Electric wires are left uncovered and non-insulated.

.....

School BOOK Exercises

on Unit 2

Answer Guide P. 19

1 Complete the following sentences:

1. and are two ways for connecting electricity.
2. and are some precautions should be taken while dealing with the electricity.
3. The simple electric circuit consists of,, and
4. and are examples of the electric insulating materials.
5. In the case of connecting the lamps in the lighting of the lamps decreases with their increase in number.

2 Correct the underlined words in the following sentences:

1. The electric lamp converts the electric energy to the kinetic energy.
2. The filament of the light bulb is made of carbon.
3. While connecting the lamps in parallel, the lamps are connected one after the other.
4. There are two connecting points at each end of the light bulb ends.
5. The electric fire occurs due to the passage of the electric current through the human body.
6. The electric lamps are connected in the house in series.
7. The lamps in the electric circuit continue to work when connecting in series if a lamp is damaged.
8. The glass bulb of the electric lamp contains hydrogen gas.
9. Wood is considered a good conductor of electricity.

3 Give a reason for each of the following:

1. The swelling of the electric lamp contains an inert gas instead of air.
2. Not placing metal things inside the socket.
3. There are connecting points at the ends of the fluorescent lamps.
4. Not placing flammable materials too close to the electric machines that generate heat.

Worksheets & Exams

4 Compare between each of the following:

1. Connecting electric lamps in series and connecting in parallel.
2. The light bulbs and the fluorescent lamps in respect of structure.
3. The conducting materials of electricity and the non-conducting materials.

5 Write the scientific term of each of the following:

1. Materials that allow the electric current to pass through. (.....)
2. Fires occur due to the increase it the temperature of the electric wires. (.....)
3. Materials that don't allow the electric current to pass through. (.....)
4. The way that the electric lamps are connected one after the other, and the intensity of the light of the lamps decreases with the increase in their number. (.....)
5. The way of converting the electric energy to light energy. (.....)
6. The way that the lamps are connected through branching routes and the light of the lamps are not affected with the increase in their number. (.....)
7. One of the dangers of the electricity occurs due to the passing of the electric current through the human body. (.....)
8. One of the dangers of electricity is that it destroys the tissues of the body. (.....)

6 Write an explanation for each of the following:

1. The electric shock.

.....

2. The electric fires.

.....

3. The electric lamp.

.....

4. The precautions that should be taken to deal with the electricity.

.....

.....

.....

.....



GEM

General Tests on Unit

2

Answer Guide P. 19

(Total mark: 20)

Test 1

1 A) Complete the following sentences:

(5 marks)

1. Among the methods of connecting electric lamps are connecting in and connecting in
2., iron and are good conductors of electricity.
3. In the home, connection of lamps is better than connection.
4. and are kinds of electric lamps.

B) Compare between:

Natural sources of light and artificial sources of light. Give examples.

2 A) Correct the underlined words in the following sentences:

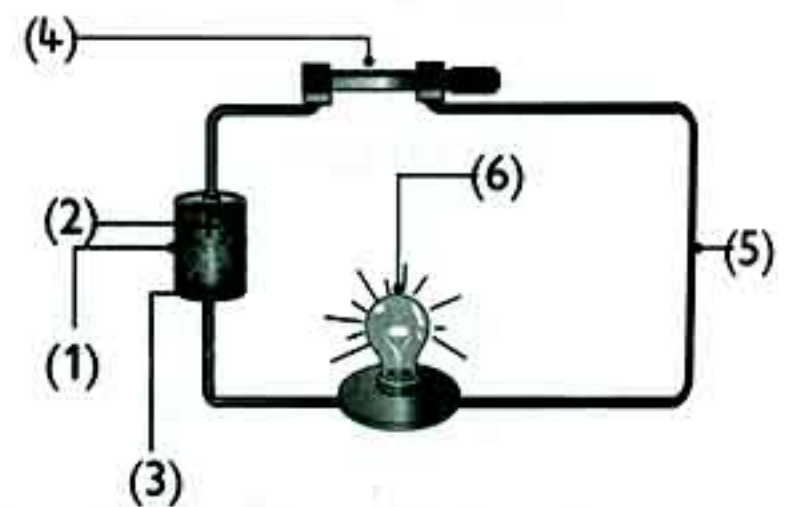
(5 marks)

1. Electric energy is converted into kinetic energy in the electric lamp.
2. The filament of the regular bulb is made of carbon.
3. On connecting in parallel, lamps are connected one after another.
4. The regular lamp has two conducting points at each of its two ends.
5. Electric fires happen when electricity passes in the human body.
6. Electric lamps are connected in series in houses.
7. The glass bulb of the regular lamp contains hydrogen gas.
8. Wood is a good conductor of electricity.

B) Label the opposite figure:

1.
2.
3.
4.
5.
6.

• The function of no. (4):



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Worksheets & Exams

3 A) Write the scientific term:

(5 marks)

1. Substances that allow the electric current to pass through. (.....)
2. Fires that happen when electric devices become overheated. (.....)
3. Substances that don't allow the electric current to pass through. (.....)
4. A method where lamps are connected one after another. (.....)
5. A method where lamps are connected through branches and the light intensity is not affected. (.....)
6. A device that changes electric energy into light energy. (.....)
7. One of the dangers of electricity that happens when the electric current passes through the human body. (.....)
8. One of the dangers of electricity that causes damage to the body tissues. (.....)

B) Mention the way in which light bulbs are connected in the home. (Give reasons)

.....

.....

4 A) Give a reason for each of the following:

(5 marks)

1. The glass bulb of the electric lamp contains inert gas instead of air.
.....
2. It is advisable not to insert metal objects inside the electric socket.
.....
3. The existence of conducting points at the ends of the fluorescent lamp.
.....
4. It is advisable not to place flammable substances beside electric devices that produce heat.
.....

B) Put (✓) or (X) in front of each of the following sentences:

1. The light intensity increases in the case of series connection. ()
2. The electric circuit is an open path through which the electric current passes. ()
3. The electric fire happens when the human body touches an electric device that produces heat. ()
4. Copper is a good conductor of electricity. ()
5. The electric shock may cause death. ()
6. A wooden bar is used to push the injured during electric accidents. ()

(Total mark: 20)

Test 2

1 A) Correct the underlined words in the following sentences:

(5 marks)

1. The light intensity of electric lamps decreases by increasing their number when being connected in parallel.
2. Electricity is safe when we deal with it carelessly.
3. A person suffering from an electric shock is isolated from the electric circuit by an iron bar.
4. Water is not used in putting out electric fires because it is a bad conductor of electricity.

B) What is the importance of each of the following?

1. Covering power cables with insulating substances.
.....
2. The presence of a battery in the electric circuit.
.....

2 A) Put (✓) or (X) in front of each of the following sentences:

(5 marks)

1. All the gaseous lamps contain neon gas. ()
2. There is only one type of bases for the regular electric bulb. ()
3. Among safety precautions when dealing with electricity is not leaving electric wires uncovered. ()
4. The electric shock causes damage to the body tissues. ()

B) Compare between connecting in series and connecting in parallel.

P.O.C	Connecting in series	Connecting in parallel
1. Way of connection		
2. Light intensity		
3. The effect of burning or unscrewing any of lamps		



Worksheets & Exams

3 A) What happens in the following cases?

(5 marks)

1. Using a filament of lead in the regular bulb.

.....

2. Connecting the electric lamps in series connection.

.....

3. The absence of mercury vapor in the fluorescent lamp.

.....

B) Give a reason for each of the following:

1. There is a glass bulb around the filament.

.....

2. The presence of the battery in the electric circuit.

.....

4 A) Complete the following sentences:

(5 marks)

1. and are examples of electric insulators.

2. The simple electric circuit consists of and

3. The electric overload is the reason of

4. The damage caused by electricity and destroying the body tissues is called

B) What is the function of each of the following?

1. Conducting points in the fluorescent lamp.

.....

2. Tungsten filament.

.....

3. The electric switch in the electric circuit.

.....

Unit 3 The Universe

Lesson 1

The solar eclipse

Answer Guide P. 21

Worksheet 9

1 A) Complete the following sentences:

1. The solar eclipse is formed when lies between the Sun and on one
2. is a dark inner shadow in which the total solar eclipse occurs..
3. The rotates around the Earth in orbit.
4. The Sun emits rays which is harmful to the eyes such as and

B) What is meant by ...?

1. Umbra.

.....

2. Penumbra.

.....

2 A) Choose the correct answer:

1. Sunlight travels in lines so it casts a shadow of the dark bodies in its way.
 - a. carved
 - b. zigzag
 - c. straight
 - d. no correct answers
2. The solar eclipse occurs when the Earth is lined with the Moon and the
 - a. Earth is between the Moon and the Sun
 - b. Moon is between the Earth and the Sun
 - c. Sun is between the Moon and the Earth
 - d. no correct answers
3. The is the phenomenon of through which the sunlight is blocked by the Moon from reaching the surface of the Earth.
 - a. solar eclipse
 - b. lunar eclipse
 - c. rainbow
 - d. all the previous answers



GEM / Science / Primary 6

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Worksheets & Exams

B) What happens if ...?

1. An object is put between a light source and a screen.

.....

2. The Moon lies between the Sun and the Earth on one straight line.

.....

3 A) Write the scientific term for each of the following:

1. A natural phenomenon where the Moon lies between the Earth and the Sun on the same straight line.

(.....)

2. The area in which some light reaches the Earth, while the rest is blocked.

(.....)

3. The area where the light is blocked totally due to the presence of a dark object in the path of light.

(.....)

B) Mention the safety precautions during the solar eclipse.

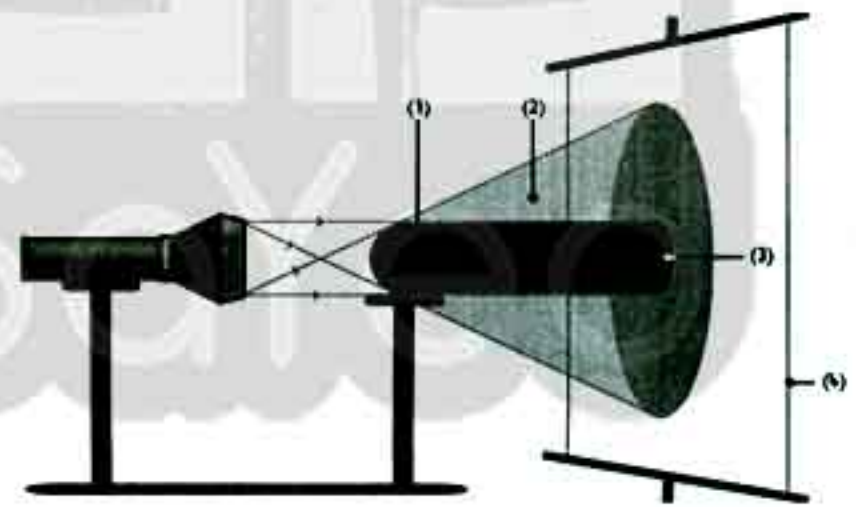
.....

.....

.....

4 A) Label the opposite figure:

1.
2.
3.
4. The screen represents



B) Give a reason for each of the following:

1. The occurrence of solar eclipse phenomenon.

.....

2. The distance between the Moon and the Earth varies during rotation.

.....

Worksheet 10

1 A) Put (✓) or (X) in front of the following sentences:

1. The solar eclipse occurs when the Moon casting its shadow on part of the Earth's surface. ()
2. Shadow is the lighting area where the total solar eclipse occurs. ()
3. We can look directly at the Sun during solar eclipse using sunglasses. ()
4. Both ultraviolet and infrared rays are useful for man. ()
5. There are two types of solar eclipse. ()

B) Compare between total solar eclipse and partial solar eclipse:

Total solar eclipse	Partial solar eclipse
.....
.....
.....

2 A) Choose the correct answer:

1. In the semi-shaded area of the Moon, we can see a part of the Sun forming what is known as the
 a. total solar eclipse b. partial solar eclipse
 c. lunar eclipse d. annular solar eclipse
2. The type of eclipse differs according to the movement of in front of the Sun.
 a. Earth b. Mercury
 c. Moon d. Mars
3. The duration of the solar eclipse doesn't exceed
 a. three minutes and few seconds b. seven minutes and few seconds
 c. two hours and few minutes d. two days and few hours

B) Give a reason for the following:

1. Special glasses are used to observe the solar eclipse.



Worksheets & Exams

2. The type of solar eclipse differs according to the movement of the Moon in front of the Sun.

3. We can't see the Sun completely during the total solar eclipse.

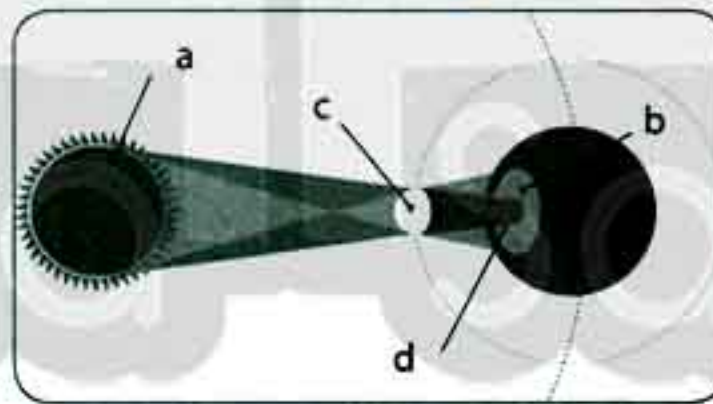
3 A) Correct the underlined words:

1. We see a partial solar eclipse when the Earth lies in the umbra area of the Moon.
2. Partial solar eclipse occurs when the Moon's cone shadow umbra doesn't reach the Earth's surface.
3. To observe the solar eclipse safely you should wear lenses.

B) What happens if ...?

1. We used special sight devices such as a telescope to see the solar eclipse.
2. There is a dark body between the Sun and the Earth.

4 A) Notice the following figure: label the letters on the drawing and explain the reason for the occurrence of the solar eclipse:



a.

b.

c.

d.

The reason:

B) Write the scientific term for each of the following:

1. The harmful rays emitted from the Sun during the solar eclipse. (.....)
2. A part of the human eye that is harmed when looking directly at the Sun. (.....)



4- What happens in the following cases :

1- Turning off one light bulb in an electric circuit contains many lamps connected in series .

.....

2- One of electric lamps burns out , while it is connected in parallel with others .

.....

5- Write the label:

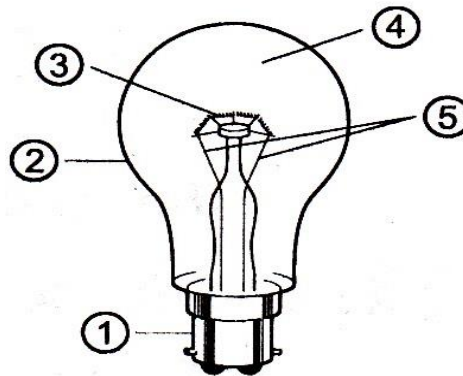
1-.....

2-

3-

4-

5-



6- Look at the figure in front of you then answers :

1- In this case , the simple circuit is thus the electric current passes through .

2- In case that any of these parts is not connected, the doesn't pass through the circuit .

3- Write the labels in the figure

1)

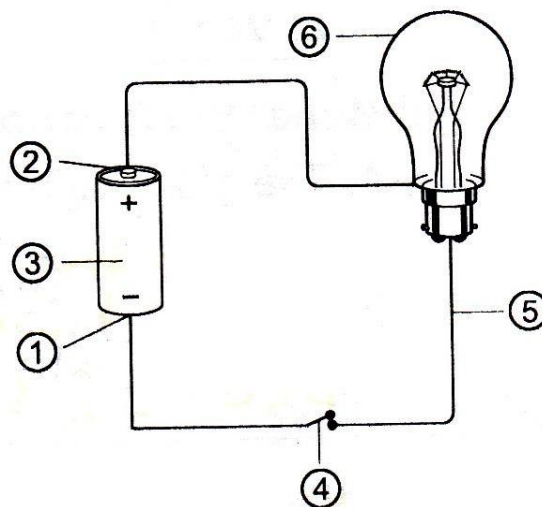
2)

3)

4)

5)

6)





1- Complete:

- 1- Iron is considered as an electrical, while wood is considered as an electrical
- 2- Electricity is used to lighten and
- 3- The harms resulting from an electric shock depend on passing in the human body and also on

2- Mention some of important precautions when dealing with electricity (only 3 points)

- a)
- b)
- c)

3- Give reason for:

- 1- The electric heater must not be placed close to furniture or rugs .
.....
- 2- We must place a piece of plastic in the socket.
.....
- 3- Impure water is not used to put out electric fires .
.....
- 4- You have an electric shock if you touch a source of electricity.
.....





4- Write the scientific Term:

- 1- A closed path that the electric current passes in. [.....]
- 2- It's caused by neglected the safety precautions that have to be followed while dealing with electricity. [.....]
- 3- The materials that allow the electric charges to flow through them . [.....]
- 4- The materials that don't allow the electric charges to flow through them . [.....]

5- What happens it:

- 1- If you touch a source of electricity which your hands.
.....
- 2- A piece of glass is inserted in a closed electric circuit .
.....
- 3- If we place several connections in the same socket.
.....

6- Put (√) or (×) and correct the wrong one :

- 1) Electric shock occurs as a result of passing an electric current through human body . ()
- 2) Water is used to put off regular fire. ()
- 3) The human body is bad conductor for electricity. ()





Exercise

A-Complete the following:

- 1-..... occurs when earth, moon and sun are nearly on one straight line with the moon in the middle.
- 2-..... hides the sunlight from us and a of the moon is formed.
- 3-There are three types of solar eclipse which are and
- 4-Doctors warn of as its rays and can lead to within few minutes.
- 5-When the earth lies in the semi – shaded area of the moon , we can see a of the sun what's known as

B- Correct the underline words :

- 1- In the semi-shaded area of the moon , we can see a part of the sun forming the total solar eclipse . (.....)
- 2- The semi- shadow is called umbra. (.....)
- 3- The solar eclipse always occurs at night . (.....)

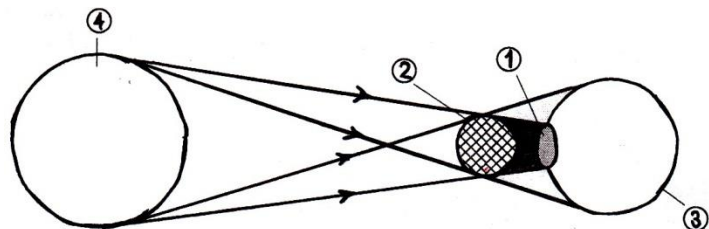
C- Identify the astronomical phenomena in the following figure then answer :

- 1- What does the figure show ?

.....

- 2- Label it .

- 1)
- 2)
- 3)
- 4)





D-Choose the correct answer :

1-.....is a phenomenon of blocking the sunlight by the moon from reaching the earth's surface.

- a)cloudy weather b)winter c)solar eclipse

2-penumbra is the

- a)dark shadow area b)sunny area c)semi-shadow area

3-The partial solar eclipse appears in the area of.....

- a)umbra b)penumbra c)no correct answer

4-To observe the solar eclipse safe you must wear.....

- a)heavy clothes b)lenses c)special glasses

C-Write the scientific term:

1-The astronomical phenomenon in which the sunlight is blocked from reaching the earth by the moon. (.....)

2-A phenomenon that its duration doesn't exceed seven minutes and few seconds . (.....)

3-Hiding the sunlight totally in the day. (.....)

4-The harmful rays emitted from the sun during the solar eclipse. (.....)

5-The faint outer shadow area of moon. (.....)

D-Give reason for each of the following:

1-Special glasses must be used to look at the solar eclipse

.....

2-We can't see the sun completely during the solar eclipse.

.....



(class work sheet)

choose the correct answers :

1. the light bulbs are connected inin the house .

- a. parallel . b. series . c. parallel and series***
d. series in some places and in parallel in the other places .

2. the inner surface of the tube of the fluorescent lamp is covered with

- a. mercury .*** ***b. a phosphoric material .***
c. copper . ***d. tungsten .***

**3. when we connect more than one bulb in series to an electric sources
the light intensity of the bulbs**

- a. decreases .*** ***b. increases .***
c. does not change . ***d. (a),(b) and (c) .***

4.are from the artificial sources that are used before inventing the electric lamps .

- a. candles .** **b. oil lamps .**
c. fluorescent lamps . **d. (a) and (b)**

5. the electric lamp converts the electric energy intoenergy.

- a. kinetic . b. light c. sound d. magnetic***

6. all the following are from the components of the light bulb except

- a. the filament*** ***b. the glass bulb .***
c. two points of connection ***d. the base of the light bulb***

2. give reason :

1. the filament of the light bulb is made of tungsten

.....

2. the glass tube of the fluorescent lamp is filled with argon gas

.....

(home work sheet)

choose the correct answers :

1. the filament of the light bulb is made of

a. tungsten . b. copper . c. iron d. wood

2. which of the following gases is found in the fluorescent lamp but not in the light bulb ?.....

a. neon b. argon c. mercury vapor d. water vapor

3. there are two point of connection at each tip of the fluorescent lamp

a. to react with tungsten filament .

b. to connect the lamp to electricity .

c. to prevent air from reaching the filament .

d. (a) , (b) and (c) .

4. when an electric lamp which is connected in series with the other lamps burns out

a. the light intensity decreases

b. the light intensity increases

c. all lamps turn off

d. no correct answers

5. if we have three light bulbs and we need to get high light intensity so we must connect them

A)in series

b) in parallel

c) (a) and (b)

d) without copper wires

6. the electric lamps represent a constant source of light that is.....

a. clear b. bright c. free from smoke and odor d.(a),(b),and (c)

2. correct the underlined word :

1. the electric lamp converts the electric energy into kinetic energy

()

2.the filament of the light bulb is made of carbon ()

(class work sheet)

choose the correct answers :

1. in our daily life , electricity can be used in

- a. cooking and preserving food b. lighting houses and factories**
c. operating some machines d. (a) ,(b) and (c)

2. all the following materials allow the flow of the electric current except

- a. iron b. copper c. rubber d. aluminum**

3.is a good conductor of electricity .

- a. wood b. iron c. plastic d. glass**

4. materials that do not allow the flow of electricity through them are called

- a. electric conductors b. electric burns**
c. electric insulators d. electric fires

5. dangers of electricity include

- a. electric fires b. electric shock**
c. electric burn d . (a) , (b) and (c)

6. plugging many machines to one socket may cause

- a. electric overload b. heating up of wires**
c. fires d. (a) , (b) and (c)

7.is bad conductor of electricity

- a. glass b. copper c. iron d. aluminum**

2. give reason for :

1- plugging more than one machine to one socket causes electric fires.

.....

2- not disconnecting the electric current from the electric machine after use causes fires .

.....

(home work sheet)

choose the correct answers :

1. to avoid the occurrence of electric shock , you should not.....

- a. touch the naked wires .**
- b. touch electric machines with wet hand .**
- c. put metallic objects in the electric socket .**
- d. (a) , (b) and (c) .**

2 . water cannot be used to put out electric fires , because

- a. it is a good conductor of electricity .**
- b. it is a bad conductor of electricity .**
- c. it may evaporate**
- d. it is not cold**

3. the electric shock may cause

- a. electric fires**
- b. electric overload**
- c. electric burns**
- d. electric current**

4. the electric wires are made of

a. glass b. plastic c. rubber d. copper

5. electric wires must be covered with.....

a. copper b. plastic c. iron d. lead

6. which of the following is from the precautions in dealing with electricity ?

a. place several connections in the same socket .

b. play with the electric connections. c. no correct answers

2. write the scientific term :

1. the material that should not be used to put out electric fire ()

2. a danger of electricity that happens when plugging more than one machine to one socket ()

(class work sheet)

choose the correct answers :

1. when the moon lies between the sun and the earth , it casts its shadow on

- a. the earth b. the sun c. itself d .no correct answer**

2.is the phenomenon of blocking the sunlight by the moon from reaching the surface of earth .

- a. cloudy weather** **b. winter**
c. lunar eclipse **d. solar eclipse**

3. umbra is the

- a. dark shadow area*** ***b. semi-shadow area***
c. lightened area ***d. all day***

4. the orbit of the moon around the earth is

- a. oval b. circular c. spherical d. rectangular***

5. when the moon lies in one straight line between the sun and the earth at a nearer distance to earth ,.....happens .

- a. total solar eclipse*** ***b. lunar eclipse***
c. annular solar eclipse ***d. partial solar eclipse***

6. when the moon lies in the higher orbit than the earth in front of the sun ,.....happens .

- a. total solar eclipse** **b. partial solar eclipse**
c. annular solar eclipse **d. lunar eclipse**

2. give reason for :

1. the total solar eclipse appears at umbra

2. we see the sun as a lighting ring when annular solar eclipse is formed .

(home work sheet)

choose the correct answers :

1. the partial solar eclipse appears in the area of

a. umbra b. penumbra c. antumbra d. no correct answer

**2. when the moon prevents part of sunlight from reaching earth
.....is produced .**

a. total solar eclipse ***b. lunar eclipse***

c. partial solar eclipse **d. annular solar eclipse**

3. in the semi-shaded area of the moon , we can see a part of the sun forming what is known as the

a. total solar eclipse ***b. partial solar eclipse***

c. lunar eclipse **d. annular eclipse**

4.is the dark inner shadow area in which the total solar eclipse appears .

a . umbra ***b . penumbra***

c. antumbra **d. no correct answers**

5.is the faint outer shadow area in which the partial solar eclipse appears .

a. umbra b. penumbra c. Antumbra d. no correct answers

6. to observe the solar eclipse safely , you should wear.....

a. special glasses b. heavy clothes

c. medical glasses d. lenses

2.write the scientific term :

1. the solar eclipse in which part of the sun disappears ()

2. the moon's dark inner shadow area ()

3. the faint outer shadow area of moon ()